UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,600	10/31/2003	Juha H. Salo	P4573US00	9871

11764 7590 02/28/2011

Ditthavong Mori & Steiner, P.C.
918 Prince Street
Alexandria, VA 22314

EXAMINER	
SAINT CYR, JEAN D	

ART UNIT	PAPER NUMBER
2425	

MAIL DATE	DELIVERY MODE
02/28/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/698,600	SALO ET AL.	
	Examiner	Art Unit	
	JEAN Duclos SAINT CYR	2425	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15,17,18,20-30,32,33 and 35-345* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15,17,18,20-30,32,33 and 35-345* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/10/2011 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 15, 17-18, 20-30, 32-33, 35-45, 47-48, 50-60, 62-71, 74-76 have been fully considered, they are not persuasive. With respect to independent claims 15, 30, 45 and 60, applicant argues that the cited references did not disclose determine to access the at least one piece of pre-broadcast content from the memory at a time synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content. Also, applicant argues that it is not possible to present broadcast content from a buffer and maintain synchronization with the live broadcast of the same content.

However, Watson et al disclose the movies are pushed down by the provider to reside passively in the box for a finite time period,0012; a movie may arrive and be stored in the set-top box, however it may have a start date associated with it which does not allow it to be viewed until that date,0014; according to this information the service provider pushes to content to the user without requesting and the user will be able to access that preloaded content according to a predefined schedule.

And each preloaded stream file stored in the receiving apparatus is synchronized with the clock transmitted from the broadcasting station to be reproduced, col.17, lines 13-16; computes the difference between the current time and the program start time. The computed difference denotes an elapsed time from the start of the program, col.17, lines 1-12; compares the internal clock 13 with the organization data in the memory 12

to determine a program to be reproduced next, col.21, lines 8-36; col.29, lines 56-61; determining whether or not the time indicated by the clock 33 indicates the broadcasting of the program concerned,col.35, col.66-67; col.36, line 1-2; this system compares the current time with the program start time in order to synchronize broadcast and that comparison controls the access of the preloaded content.

And Jiang et al disclose Video data smoothing preloads part of the video data to a smoothing buffer at the client before play-out. After play-out has started, the rest of the video data may be transmitted in a less bursty fashion without compromising the quality of the video data. For given video data, video data smoothing generates the transmission schedule, 0027.

And Jiang et al disclose once received by the client receiver 160, the client equipment controller 170 controls the client smoothing buffer to store the received packets 107 for smoothing until the scheduled play-out time of each packet. The client equipment controller 170 controls the client smoothing buffer 180 via link 175 to provide the data packets 107 to the client play-out mechanism 190 via 185 when the play-out time of the packets 107 is reached. The client equipment controller 170 controls the client play-out mechanism 190 via link 195 to play-out the received packets 107 according to the play-out schedule of the video data packets 0037; assume the first 25 frames were preloaded to the client buffer before play-out. Once play-out started, one frame was played at the beginning of every time slot,0084; with this information it is clear that the preloaded part of content is retrieve from the buffer and when the playback of the preloaded part is over, the system gets real-time frames from the broadcast server according to a predefined schedule established by the service provider. Only the beginning of the broadcast is retrieved from buffer according to the predefined schedule. As a result, this action is made non-final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 15, 17-18, 20-23, 25, 27, 29-30, 32-33, 35-38, 40, 42, 44-45, 47-48,50-53, 55, 57, 59-60, 62-67, 69, 71, 74-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al in view of Fujinami further in view of Jiang et al, US No. 20090154445.

Re claim 15, Watson et al disclose at least one processor(see fig.1.f, set top box);and at least one memory including computer program code for one or more programs(see fig.1f, mass storage; the set top box will begin power-up initialization by loading and executing boot code that resides in Flash memory,0124),

the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following, determine to store, in the memory, at least one piece of pre-broadcast content(The movies are pushed down by the provider to reside passively in the box for a finite time period,0012; A movie may arrive and be stored in the set-top box, however it may have a start date associated with it which does not allow it to be viewed until that date,0014).

But did not explicitly disclose associated with a same at least one piece of broadcast content maintained by a content source, the at least one piece of pre-broadcast content being stored before a scheduled time for a live broadcast of the

associated same at least one piece of broadcast content by the content source, the scheduled time specified by a schedule; determine to access the at least one piece of pre-broadcast content from the memory at a time synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content;

receive the live broadcast of the associated same at least one piece of broadcast content from the content source; and determine to present the accessed at least one piece of pre-broadcast content synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content by the content source.

However, Fujinami et al disclose associated with a same at least one piece of broadcast content maintained by a content source, the at least one piece of pre-broadcast content being stored before a scheduled time for a live broadcast of the associated same at least one piece of broadcast content by the content source, the scheduled time specified by a schedule; determine to access the at least one piece of pre-broadcast content from the memory at a time synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content(each preloaded stream file stored in the receiving apparatus is synchronized with the clock transmitted from the broadcasting station to be reproduced, col.17, lines 13-16; computes the difference between the current time and the program start time. The computed difference denotes an elapsed time from the start of the program, col.17, lines 1-12; compares the internal clock 13 with the organization data in the memory 12 to determine a program to be reproduced next, col.21, lines 8-36; col.29, lines 56-61; determining whether or not the time indicated by the clock 33 indicates the broadcasting of the program concerned,col.35, col.66-67; col.36, line 1-2).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Fujinami into the invention of Watson for the purpose of limiting congestion of bandwidth during transmission.

And Jiang et al disclose receive the live broadcast of the associated same at least one piece of broadcast content from the content source; and determine to present the accessed at least one piece of pre-broadcast content synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content by the content source(Video data smoothing preloads part of the video data to a smoothing buffer at the client before play-out. After play-out has started, the rest of the video data may be transmitted in a less bursty fashion without compromising the quality of the video data. For given video data, video data smoothing generates the transmission schedule, 0027; 0037; assume the first 25 frames were preloaded to the client buffer before play-out. Once play-out started, one frame was played at the beginning of every time slot,0084).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Jiang into the invention of Watson as modified by Fujinami for the purpose of playing preload content and live content synchronously.

Re claim 17, Watson et al disclose wherein at least one piece of pre-broadcast content is stored before the content source broadcasts the associated same at least one piece of broadcast content(The movies are pushed down by the provider to reside passively in the box for a finite time period, 0012).

Re claim 18, Watson et al disclose wherein the apparatus is further caused to: receive at least one piece of broadcast content maintained by a continuity server of the content source, wherein the received at least one piece of broadcast content is stored as the at least one piece of pre-broadcast content((the method involves transmitting movies to a set-top box; the content delivery system is responsible for delivering data to set top boxes, 0044; the method involves transmitting movies to a set-top box and

allowing movies to accumulate. A hard disk drive in the set-top box is used to store movies, 0008; 0012).

Re claim 20, Watson et al disclose wherein the received at least one piece of broadcast content is an encoded, and wherein the apparatus is further caused to: decode the encoded at least one piece of broadcast content(content preparation & encoding; Movies are transmitted to the set-top box using a new data casting technology which allows data to be encoded onto standard television signals and transmitted using existing television transmitters and broadcast towers, 0012; PES Decryption/De-scramble; the set top box allows for the movie to be decrypted and played, 0015).

Re claim 21, Watson et al did not explicitly disclose wherein the schedule further specifies at least one scheduled time for a live broadcast of at least one piece of live broadcast content by the content source, wherein the apparatus is further caused to: receive the at least one piece of live broadcast content when a current time matches the scheduled time for the live broadcast of the at least one piece of live broadcast content, wherein the at least one piece of pre-broadcast content is accessed using at least one of the at least one piece of pre-broadcast content stored in the memory or the at least one piece of live broadcast content received at the apparatus, and wherein the accessed -pre-broadcast content is presented using at least one of the accessed at least one piece of pre-broadcast content or the accessed at least one piece of live broadcast content.

However, Fujinami et al disclose wherein the schedule further specifies at least one scheduled time for a live broadcast of at least one piece of live broadcast content by the content source, wherein the apparatus is further caused to: receive the at least one piece of live broadcast content when a current time matches the scheduled time for the live broadcast of the at least one piece of live broadcast content, wherein the at least one piece of pre-broadcast content is accessed using at least one of the at least one

piece of pre-broadcast content stored in the memory or the at least one piece of live broadcast content received at the apparatus, and wherein the accessed -pre-broadcast content is presented using at least one of the accessed at least one piece of pre-broadcast content or the accessed at least one piece of live broadcast content(the facilities for performing live broadcasting is now shown in the transmitting apparatus 1 shown in FIG. 8, when performing live broadcasting, the outputting of video and audio signals may be started, upon reaching a predetermined time, from a broadcast recording studio (not shown) installed in parallel to the VTR cart 14, instead of setting a VTR tape recording the program to the VTR cart 14, thereby supplying the video and audio signals to the video encoder 15 and the audio encoder 16 respectively, col.21, lines 6-14; col.13, lines 13-17).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Fujinami into the invention of Watson for the purpose of allowing users to watch real-time programs.

Re claim 22, Watson et al did not explicitly disclose wherein the apparatus is further caused to: determine to release each piece of pre-broadcast content when a current time of the apparatus matches the scheduled time for the live broadcast of the associated same piece of broadcast content by the content source, wherein at least one released piece of pre-broadcast content is accessed.

However, Fujinami et al disclose wherein the apparatus is further caused to: determine to release each piece of pre-broadcast content when a current time of the apparatus matches the scheduled time for the live broadcast of the associated same piece of broadcast content by the content source, wherein at least one released piece of pre-broadcast content is accessed(each preloaded stream file stored in the receiving apparatus is synchronized with the clock transmitted from the broadcasting station to be reproduced, col.17, lines 13-16; computes the difference between the current time and

the program start time. The computed difference denotes an elapsed time from the start of the program, col.17, lines 1-12).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Fujinami into the invention of Watson for the purpose of allowing users to watch pre-loaded contents according to a defined schedule.

Re claim 23, Watson et al did not explicitly disclose wherein the content source broadcasts a one same at least one piece of broadcast content when a current time of the content source matches the scheduled time for the one same at least one piece of broadcast content, and wherein the apparatus is further caused to: determine to synchronize the current time of the apparatus with the current time of the content source.

However, Fujinami et al disclose wherein the content source broadcasts a one same at least one piece of broadcast content when a current time of the content source matches the scheduled time for the one same at least one piece of broadcast content, and wherein the apparatus is further caused to: determine to synchronize the current time of the apparatus with the current time of the content source(provides the selected program to the user in synchronization with the supplied time information, col.15, lines 4-5; col.17, lines 13-16).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Fujinami into the invention of Watson for the purpose of allowing users to watch pre-loaded contents according to the schedule of the broadcast server.

Re claim 25, Watson et al disclose wherein the apparatus is further caused to: determine to expire each -piece of pre-broadcast content when the current time is subsequent to the scheduled time for the associated same piece of broadcast content; and determine to delete, from the memory of the apparatus, at least one expired piece of pre-broadcast content(the content provider may specify an end date associated with a movie, after which date the movie can no longer be viewed, and is automatically deleted from the set-top box, 0182).

Re claim 27, Watson et al disclose wherein the at least one piece of pre-broadcast content further is stored with the schedule(Any Movie news or Barker Channel content that has passed its end SCHEDULE_PERIOD date should be deleted,0216).

Re claim 29, Watson et al disclose wherein the schedule includes at least one slot specifying a scheduled time and at least one associated piece of the pre-broadcast content stored in the memory, wherein the apparatus is further caused to: receive at least one slot of the schedule at the apparatus, wherein the associated at least one piece of pre-broadcast content is accessed in accordance with the at least one slot received at the apparatus(running set of videos seen while the user is on the user interface main menu, showing what products are available,0092).

As claim 30, the claimed determining to store, in a memory of an apparatus, at least one piece of pre-broadcast content associated with a same at least one piece of broadcast content maintained by a content source, the at least one piece of pre-broadcast content being stored before a scheduled time for a live broadcast of the associated same at least one piece of broadcast content by the content source, the scheduled time specified by a schedule…; receiving the live broadcast of the associated same at least one piece of broadcast content from the content source…" is composed as the same structural elements as previously discussed with respect to the rejection of claim 15.

Re claim 32, is met as previously discussed with respect to claim 17.
Re claim 33, is met as previously discussed with respect to claim 18.
Re claim 35, is met as previously discussed with respect to claim 20.
Re claim 36, is met as previously discussed with respect to claim 21.
Re claim 37, is met as previously discussed with respect to claim 22.
Re claim 38, is met as previously discussed with respect to claim 23.
Re claim 40, is met as previously discussed with respect to claim 25.
Re claim 42, is met as previously discussed with respect to claim 27.
Re claim 44, is met as previously discussed with respect to claim 29.

As claim 45, the claimed determining to store, in a memory of the apparatus, at least one piece of pre-broadcast content associated with a same at least one piece of broadcast content maintained by a content source, the at least one piece of pre-broadcast content being stored before a scheduled time for a live broadcast of the associated same at least one piece of broadcast content by the content source, the scheduled time specified by a schedule...; receiving the live broadcast of the associated same at least one piece of broadcast content from the content source..." is composed as the same structural elements as previously discussed with respect to the rejection of claim 15.

Re claim 47, is met as previously discussed with respect to claim 17.
Re claim 48, is met as previously discussed with respect to claim 18.
Re claim 50, is met as previously discussed with respect to claim 20.
Re claim 51, is met as previously discussed with respect to claim 21.
Re claim 52, is met as previously discussed with respect to claim 22.
Re claim 53, is met as previously discussed with respect to claim 23.
Re claim 55, is met as previously discussed with respect to claim 25.
Re claim 57, is met as previously discussed with respect to claim 27.
Re claim 59, is met as previously discussed with respect to claim 29.

Re claim 60, Watson et al disclose a content source comprising a continuity server configured to maintain at least one piece of broadcast content and a schedule,, and wherein the content source is configured to broadcast the at least one piece of broadcast content in accordance with the schedule(the content delivery system is responsible for delivering data to set top boxes, 0044; see fig.1, digital asset management ; the distribution database contains content and component broadcast schedules, data cast distribution logs and set top box pre-load information, 0051); and

a terminal configured to: store, in a memory, at least one piece of pre-broadcast content -associated with a same at least one piece of broadcast content maintained by the continuity server, store the at least one piece of pre-broadcast content before the scheduled time for the live broadcast of the associated same at least one piece of broadcast content(The set-top box has a processor which is capable of receiving the data stream from the broadcast signal, reassembling data, and writing data to the hard drive, 0011);

But did not explicitly disclose wherein the schedule specifies at least one scheduled time for a live broadcast of the at least one piece of broadcast content by the content source; access the at least one piece of pre-broadcast content from the memory at a time synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content,

receive the live broadcast of the associated same at least one piece of broadcast content from the content source, and present the accessed at least one piece of pre-broadcast content synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content by the content source.

However, Fujinami et al disclose wherein the schedule specifies at least one scheduled time for a live broadcast of the at least one piece of broadcast content by the content source; access the at least one piece of pre-broadcast content from the memory at a time synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content(when performing live broadcasting, the outputting of video and audio signals may be started, upon reaching a predetermined time, from a broadcast recording studio installed in parallel to the VTR cart 14, instead of setting a VTR tape recording the program to the VTR cart 14, thereby supplying the video and audio signals to the video encoder 15 and the audio encoder 16 respectively, col.21, lines 6-14; col.13, lines 13-17; each preloaded stream file stored in the receiving apparatus is synchronized with the clock transmitted from the broadcasting station to be reproduced, col.17, lines 13-16; computes the difference between the current time and the program start time. The computed difference denotes an elapsed time from the start of the program, col.17, lines 1-12).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Fujinami into the invention of Watson for the purpose of allowing users to access pre-loaded contents according to a predefined schedule of the broadcast.

And Jiang et al disclose receive the live broadcast of the associated same at least one piece of broadcast content from the content source, and present the accessed at least one piece of pre-broadcast content synchronized with the scheduled time for the live broadcast of the associated same at least one piece of broadcast content by the content source(Video data smoothing preloads part of the video data to a smoothing buffer at the client before play-out. After play-out has started, the rest of the video data may be transmitted in a less bursty fashion without compromising the quality of the video data. For given video data, video data smoothing generates the transmission schedule, 0027; 0037; assume the first 25 frames were preloaded to the client buffer

before play-out. Once play-out started, one frame was played at the beginning of every time slot,0084).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Jiang into the invention of Watson as modified by Fujinami for the purpose of playing preload content and live content synchronously.

Re claim 62, Watson et al disclose wherein the terminal stores the at least one piece of pre-broadcast content before the content source broadcasts the associated same at least one piece of broadcast content(The movies are pushed down by the provider to reside passively in the box for a finite time period, 0012).

Re claim 63, Watson et al disclose wherein the content source is further configured to send, to the terminal, the at least one piece of broadcast content maintained by the continuity server, and wherein the received at least one piece of broadcast content is stored by the terminal as the at least one piece of pre-broadcast content(the method involves transmitting movies to a set-top box and allowing movies to accumulate. A hard disk drive in the set-top box is used to store movies, 0008; 0012; the method involves transmitting movies to a set-top box; the content delivery system is responsible for delivering data to set top boxes, 0044).

Re claim 64, Watson et al disclose wherein the content source is further configured to encode the at least one piece of broadcast content, by at least one of encoding or transcoding the at least one piece of broadcast content before sending to the terminal, and wherein the terminal is further configured to decode the encoded at least one piece of broadcast content(see fig.1f, PES Decryption/De-scramble; the set top box allows for the movie to be decrypted and played, 0015; see fig.1, content preparation & encoding; Movies are transmitted to the set-top box using a new data casting technology which

allows data to be encoded onto standard television signals and transmitted using existing television transmitters and broadcast towers, 0012).

Re claim 65, is met as previously discussed with respect to the rejection of claim 21.

Re claim 66, Watson et al disclose wherein the terminal is further configured to release each piece of pre-broadcast content when a current time of the terminal matches the scheduled time for the live broadcast of the associated same piece of broadcast content by the content source, and wherein -at least one released piece of pre-broadcast content is accessed(The actual movie content on the hard disk drive is turned over periodically, as scheduled by the digital asset manager, 0092; that means pre-stored contents are activated according to predefined schedule).

Re claim 67, is met as previously discussed with respect to the rejection of claim 23.

Re claim 69, Watson et al disclose wherein the terminal is a-l-so further configured to expire each piece of pre-broadcast content when the current time is subsequent to the scheduled time for the associated same piece of broadcast content, and to delete, from the memory, at least one expired piece of pre- broadcast content(the content provider may specify an end date associated with a movie, after which date the movie can no longer be viewed, and is automatically deleted from the set-top box, 0182).

Re claim 71, Watson et al disclose wherein the terminal is also configured to store a schedule comprising the same schedule maintained by the continuity server(see fig.1a, scheduler; Any Movie news or Barker Channel content that has passed its end SCHEDULE_PERIOD date should be deleted,0216; that means it was stored locally).

Re claim 74, Watson et al did not explicitly disclose further comprising: determining to combine the accessed at least one piece of pre-broadcast content with the received live broadcast of the associated same at least one piece of broadcast content; and determining to present the combined content consistent with the scheduled time.

However, Jiang et al disclose further comprising: determining to combine the accessed at least one piece of pre-broadcast content with the received live broadcast of the associated same at least one piece of broadcast content; and determining to present the combined content consistent with the scheduled time(Video data smoothing preloads part of the video data to a smoothing buffer at the client before play-out. After play-out has started, the rest of the video data may be transmitted in a less bursty fashion without compromising the quality of the video data. For given video data, video data smoothing generates the transmission schedule, 0027; 0037; assume the first 25 frames were preloaded to the client buffer before play-out. Once play-out started, one frame was played at the beginning of every time slot,0084).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Jiang into the invention of Watson as modified by Fujinami for the purpose of playing preload content and live content synchronously.

Re claim 75, is met as previously discussed with respect to the rejection of claim 74.

Re claim 76, Watson et al did not explicitly disclose wherein the accessed at least one piece of pre-broadcast content is presented at a beginning of a time slot in the schedule, and the received live broadcast of the associated same at least one piece of broadcast content is presented.

However, Jiang et al disclose wherein the accessed at least one piece of pre-broadcast content is presented at a beginning of a time slot in the schedule, and the received live broadcast of the associated same at least one piece of broadcast content is presented(Video data smoothing preloads part of the video data to a smoothing buffer at the client before play-out. After play-out has started, the rest of the video data may be transmitted in a less bursty fashion without compromising the quality of the video data. For given video data, video data smoothing generates the transmission schedule, 0027; 0037; assume the first 25 frames were preloaded to the client buffer before play-out. Once play-out started, one frame was played at the beginning of every time slot,0084).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Jiang into the invention of Watson as modified by Fujinami for the purpose of playing preload content and live content synchronously.

Re claim 77, Watson et al did not explicitly disclose wherein the scheduled time is outside of a prime time.

However, Fujinami et al disclose wherein the scheduled time is outside of a prime time (transmission of the storage data in six hours from 0:00 to 6:00 in the morning, col.12, lines 13-14).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to incorporate the teaching of Fujinami into the invention of Watson for the purpose of limiting congestion of bandwidth.

Claims 24,26, 28, 39,41, 43, 54, 56, 58, 68, 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al in view of Fujinami et al further in view of Jiang et al and further in view Connelly et al, US No. 7284064.

Re claim 24, Watson et al disclose wherein the apparatus is further caused to: determine to expire each piece of pre-broadcast content when the current time is subsequent to the scheduled time for the associated same piece of broadcast content(Movie Expirations, 0304; the movies are pushed down by the provider to reside passively in the box for a finite time period, 0012).

But did not explicitly disclose determine to maintain, in the memory of the apparatus, at least one expired piece of pre-broadcast content.

However, Connelly et al disclose determine to maintain, in the memory of the apparatus, at least one expired piece of pre-broadcast content(if a user has not watched a particular piece of content, the storage space occupied by that piece of content is generally considered not to be available for storage of another piece of content, col.14, lines 56-59).

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Watson in view of Fujinami and Jiang in introducing keep expired content in storage, as taught by Connelly, for the purpose of allowing users to watch passed programs.

Re claim 26, Watson et al disclose wherein the at least one expired piece of pre-broadcast content maintained in the memory is overwritten with at least one subsequent piece of pre-broadcast content(the content provider may specify an end date associated with a movie, after which date the movie can no longer be viewed, and is automatically deleted from the set-top box, 0182).

But did not explicitly disclose wherein the apparatus is further caused to: determine to maintain at least one expired piece of pre-broadcast content in the memory of the apparatus.

However, Connelly et al disclose if a user has not watched a particular piece of content, the storage space occupied by that piece of content is generally considered not to be available for storage of another piece of content, col.14, lines 56-59; that means expired contents can stay in the hard drive for a while if not watched yet.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Watson in view of Fujinami and Jiang in introducing keep expired content in storage, as taught by Connelly, for the purpose of allowing users to watch passed programs.

Re claim 28, Watson et al disclose wherein the schedule includes at least one slot specifying broadcast of a selectable piece of pre-broadcast content at a respective scheduled time, wherein the apparatus is further caused to: receive a selection of at least one piece of pre-broadcast content stored in the memory for the at least one slot(Once a movie has been selected, 0227; running set of videos seen while the user is on the user interface main menu, showing what products are available, 0092).

But did not explicitly disclose determine to modify modifying the schedule to specify the selected at least one piece of pre-broadcast content in the at least one slot.

However, Connelly et al disclose broadcast schedules can change over time depending on which data files are available from the server and which content or data files are accessed and/or classified by the clients, col.15, lines 11-14.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Watson in view of Fujinami and Jiang in introducing modify the schedule, as taught by Connelly, for the purpose of allowing the system to update the schedule according to selection of the users.

Re claim 39, is met as previously discussed with respect to claim 24.
Re claim 41, is met as previously discussed with respect to claim 26.
Re claim 43, is met as previously discussed with respect to claim 28.
Re claim 54, is met as previously discussed with respect to claim 24.
Re claim 56, is met as previously discussed with respect to claim 26.
Re claim 58, is met as previously discussed with respect to claim 28.

Re claim 68, Watson et al disclose wherein the terminal is further configured to expire each piece of pre-broadcast content when the current time is subsequent to the scheduled time for the associated same piece of broadcast content(Movie Expirations, 0304; the movies are pushed down by the provider to reside passively in the box for a finite time period, 0012).

But did not explicitly disclose maintain, in the memory, at least one expired piece of pre- broadcast content.

However, Connelly et al disclose if a user has not watched a particular piece of content, the storage space occupied by that piece of content is generally considered not to be available for storage of another piece of content, col.14, lines 56-59; that means expired contents can stay in the hard drive for a while if not watched yet.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Watson in view of Fujinami and Jiang in introducing keep expired content in storage, as taught by Connelly, for the purpose of allowing users to watch passed programs.

Re claim 70, Watson et al disclose the at least one expired piece of pre-broadcast content maintained in the memory is deleted by overwriting it with at least one subsequent piece of pre-broadcast content(the content provider may specify an end

date associated with a movie, after which date the movie can no longer be viewed, and is automatically deleted from the set-top box, 0182).

But did not explicitly disclose wherein the terminal is further configured to maintain at least one expired piece of pre-broadcast content in the memory.

However, Connelly et al disclose if a user has not watched a particular piece of content, the storage space occupied by that piece of content is generally considered not to be available for storage of another piece of content, col.14, lines 56-59; that means expired contents can stay in the hard drive for a while if not watched yet.

It would have been obvious for any person of ordinary skill in the art at that time the invention was made to modify the invention of Watson in view of Fujinami and Jiang in introducing keep expired content in storage, as taught by Connelly, for the purpose of allowing users to watch passed programs.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Duclos Saintcyr whose phone number is 571-270-3224. The examiner can normally reach on M-F 7:30-5:00 PM EST.If attempts to reach the examiner by telephone are not successful, his supervisor, Brian Pendleton, can be reach on 571-272-7527. The fax number for the organization where the application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see htpp://pair-direct.uspto.gov. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll free). If you would like assistance from a USPTO Customer Service Representative or access to the

automated information system, dial 800-786-9199(IN USA OR CANADA) or 571-272-1000.

Jean Duclos Saintcyr
Patent Examiner, Art Unit 2425

/KIEU-OANH BUI/
Primary Examiner, Art Unit 2425